

## SGCN and Conservation Actions Associated with Habitat Groupings

### Habitat Grouping: Streams, Rivers, Lakes, and Ponds

#### Macrogroup Lake & River Shore

**Habitat System** Laurentian-Acadian Lakeshore Beach

#### Macrogroup Rivers and Streams

**Habitat System** Ephemeral

**Habitat System** Headwaters and Creeks

**Habitat System** Large River

**Habitat System** Medium River

**Habitat System** Small River

#### Macrogroup Lakes and Ponds

**Habitat System** Dystrophic

**Habitat System** Eutrophic

**Habitat System** Mesotrophic or Intermediate

**Habitat System** Oligotrophic

### Species Associated with this Grouping

Total SGCN: 1: 20 2: 27 3: 27 Total SGCN (primary habitat): 1: 17 2: 11 3: 18

Class	<i>Actinopterygii</i> (Ray-finned Fishes)	SGCN Category
Species	<i>Acipenser brevirostrum</i> (Shortnose Sturgeon)	1
Species	<i>Acipenser oxyrinchus</i> (Atlantic Sturgeon)	1
Species	<i>Alosa aestivalis</i> (Blueback Herring)	1
Species	<i>Alosa pseudoharengus</i> (Alewife)	2
Species	<i>Alosa sapidissima</i> (American Shad)	1
Species	<i>Anguilla rostrata</i> (American Eel)	2
Species	<i>Coregonus clupeaformis</i> (Lake Whitefish)	2
Species	<i>Culaea inconstans</i> (Brook Stickleback)	3
Species	<i>Erimyzon oblongus</i> (Creek Chubsucker)	3
Species	<i>Esox americanus americanus</i> (Redfin Pickerel)	2
Species	<i>Etheostoma fusiforme</i> (Swamp Darter)	2
Species	<i>Lota lota</i> (Burbot)	3
Species	<i>Margariscus margarita</i> (Pearl Dace)	3
Species	<i>Morone saxatilis</i> (Striped Bass)	2
Species	<i>Notropis bifrenatus</i> (Bridle Shiner)	2
Species	<i>Osmerus mordax</i> (Rainbow Smelt)	1
Species	<i>Prosopium cylindraceum</i> (Round Whitefish)	2
Species	<i>Rhinichthys cataractae</i> (Longnose Dace)	3
Species	<i>Salmo salar</i> (Atlantic Salmon)	1
Species	<i>Salvelinus alpinus oquassa</i> (Arctic Charr)	1
Species	<i>Salvelinus fontinalis</i> (Brook Trout)	3
Species	<i>Salvelinus namaycush</i> (Lake Trout)	3
Class	<i>Amphibia</i> (Amphibians)	SGCN Category
Species	<i>Ambystoma laterale</i> (Blue-spotted Salamander)	2
Species	<i>Gyrinophilus porphyriticus porphyriticus</i> (Northern Spring Salamander)	2
Species	<i>Lithobates pipiens</i> (Northern Leopard Frog)	2
Species	<i>Lithobates septentrionalis</i> (Mink Frog)	3
Class	<i>Aves</i> (Birds)	SGCN Category

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Species	<i>Ardea herodias</i> (Great Blue Heron)	2
Species	<i>Aythya marila</i> (Greater Scaup)	2
Species	<i>Bucephala islandica</i> (Barrow's Goldeneye)	1
Species	<i>Chaetura pelagica</i> (Chimney Swift)	2
Species	<i>Hirundo rustica</i> (Barn Swallow)	2
Species	<i>Progne subis</i> (Purple Martin)	2
Species	<i>Riparia riparia</i> (Bank Swallow)	1
Species	<i>Somateria mollissima</i> (Common Eider)	3
Species	<i>Tachycineta bicolor</i> (Tree Swallow)	2
Species	<i>Tringa solitaria</i> (Solitary Sandpiper)	2
<b>Class</b>	<b><i>Bivalvia</i> (Marine And Freshwater Molluscs)</b>	<b>SGCN Category</b>
Species	<i>Alasmidonta undulata</i> (Triangle Floater)	3
Species	<i>Alasmidonta varicosa</i> (Brook Floater)	1
Species	<i>Anodonta implicata</i> (Alewife Floater)	3
Species	<i>Lampsilis cariosa</i> (Yellow Lampmussel)	1
Species	<i>Leptodea ochracea</i> (Tidewater Mucket)	1
Species	<i>Margaritifera margaritifera</i> (Eastern Pearlshell)	3
<b>Class</b>	<b><i>Gastropoda</i> (Aquatic And Terrestrial Snails)</b>	<b>SGCN Category</b>
Species	<i>Stagnicola mighelsi</i> (Bigmouth Pondsnailed)	1
Species	<i>Stagnicola oronoensis</i> (Obese Pondsnailed)	3
<b>Class</b>	<b><i>Insecta</i> (Insects)</b>	<b>SGCN Category</b>
Species	<i>Ameletus browni</i> (A Mayfly)	3
Species	<i>Anax longipes</i> (Comet Darner)	3
Species	<i>Baetisca berneri</i> (A Mayfly)	3
Species	<i>Baetisca carolina</i> (A Mayfly)	3
Species	<i>Baetisca lacustris</i> (A Mayfly)	3
Species	<i>Baetisca rubescens</i> (A Mayfly)	3
Species	<i>Cicindela ancocisconensis</i> (White Mountain Tiger Beetle)	2
Species	<i>Cicindela marginipennis</i> (Cobblestone Tiger Beetle)	1
Species	<i>Cordulegaster obliqua</i> (Arrowhead Spiketail)	3
Species	<i>Enallagma carunculatum</i> (Tule Bluet)	3
Species	<i>Enallagma laterale</i> (New England Bluet)	2
Species	<i>Enallagma pictum</i> (Scarlet Bluet)	2
Species	<i>Epeorus frisoni</i> (Roaring Brook Mayfly)	1
Species	<i>Gomphus quadricolor</i> (Rapids Clubtail)	2
Species	<i>Lanthus vernalis</i> (Southern Pygmy Clubtail)	2
Species	<i>Leucorrhinia patricia</i> (Canada Whiteface)	2
Species	<i>Metretopus borealis</i> (A Mayfly)	3
Species	<i>Nixe horrida</i> (A Mayfly)	3
Species	<i>Ophiogomphus colubrinus</i> (Boreal Snaketail)	1
Species	<i>Ophiogomphus howei</i> (Pygmy Snaketail)	2
Species	<i>Parameletus midas</i> (A Mayfly)	3
Species	<i>Rhionaeschna mutata</i> (Spatterdock Darner)	3
Species	<i>Rhithrogena undulata</i> (A Mayfly)	3

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Species	<i>Siphonisca aerodromia</i> (Tomah Mayfly)	1
Species	<i>Siphonurus barbaroides</i> (A Mayfly)	3
Species	<i>Siphonurus barbarus</i> (A Mayfly)	2
Species	<i>Siphonurus demaryi</i> (A Mayfly)	2

<b>Class</b>	<b><i>Reptilia</i> (Reptiles)</b>	<b>SGCN Category</b>
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Species	<i>Clemmys guttata</i> (Spotted Turtle)	1
Species	<i>Emydoidea blandingii</i> (Blanding's Turtle)	1
Species	<i>Glyptemys insculpta</i> (Wood Turtle)	1

### Habitat Stressors:

Habitat-specific stressors are assigned to the Habitat Macrogroup(s) listed in the Habitat Grouping above. Habitat Macrogroup reports can be found in Maine's 2015 Wildlife Action Plan: Element 2, Table 2-3. Click on the Habitat Macrogroup of interest to launch a habitat based report summarizing relevant stressors and associated SGCN.

### Conservation Actions Assigned to this Habitat Grouping:

<b>Conservation Action</b>	<b>Category:</b> Habitat Management	<b>Biological Priority:</b> high	<b>Type:</b> new
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Identify and conserve coldwater resilient areas and waterbodies that are not amenable to the spread of invasive species

#### Stressor(s) Addressed By This Conservation Action

Invasive Non-native-Alien Species-Diseases

<b>Conservation Action</b>	<b>Category:</b> Habitat Management	<b>Biological Priority:</b> high	<b>Type:</b> on-going
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Encourage implementation of the Standards for Placing Wood Into Stream Channels to Enhance Cold Water Fisheries Habitat, also known as the Chop and Drop Rule, to replace lost natural habitat structure in streams and lakes

#### Stressor(s) Addressed By This Conservation Action

Logging and Wood Harvesting

<b>Conservation Action</b>	<b>Category:</b> Habitat Management	<b>Biological Priority:</b> high	<b>Type:</b> on-going
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Construct crossings to pass storm flows and ensure enduring aquatic SGCN organism passage

#### Stressor(s) Addressed By This Conservation Action

Roads and Railroads

<b>Conservation Action</b>	<b>Category:</b> Habitat Management	<b>Biological Priority:</b> moderate	<b>Type:</b> new
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Encourage installation of constructed wetlands to buffer waterways from wastewater contamination

#### Stressor(s) Addressed By This Conservation Action

Domestic and Urban Waste Water, Industrial and Military Effluents, Agricultural and Forestry Effluents

<b>Conservation Action</b>	<b>Category:</b> Habitat Management	<b>Biological Priority:</b> moderate	<b>Type:</b> new
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Use habitat modifications to reduce the vulnerability of habitats to species invasions, such as returning impoundments to free-flowing river conditions

#### Stressor(s) Addressed By This Conservation Action

Invasive Non-native-Alien Species-Diseases

<b>Conservation Action</b>	<b>Category:</b> Policy	<b>Biological Priority:</b> critical	<b>Type:</b> new
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Provide incentives for landowners to maintain riparian buffers

#### Stressor(s) Addressed By This Conservation Action

Domestic and Urban Waste Water, Agricultural and Forestry Effluents

<b>Conservation Action</b>	<b>Category:</b> Policy	<b>Biological Priority:</b> critical	<b>Type:</b> new
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Encourage septic inspections when a house sells to ensure that it is functioning properly

## SGCN and Conservation Actions Associated with Habitat Groupings

### Habitat Grouping: Streams, Rivers, Lakes, and Ponds

#### Stressor(s) Addressed By This Conservation Action

Domestic and Urban Waste Water

<b>Conservation Action</b>	<b>Category:</b> Policy	<b>Biological Priority:</b> critical	<b>Type:</b> on-going
Improve enforcement of existing laws related to the transport of invasive species by boats, anglers, and through the pet trade			

#### Stressor(s) Addressed By This Conservation Action

Invasive Non-native-Alien Species-Diseases

<b>Conservation Action</b>	<b>Category:</b> Policy	<b>Biological Priority:</b> critical	<b>Type:</b> on-going
Expand targeted inspections of boats and the pet trade in order to reduce the spread of invasives and raise awareness			

#### Stressor(s) Addressed By This Conservation Action

Invasive Non-native-Alien Species-Diseases

<b>Conservation Action</b>	<b>Category:</b> Policy	<b>Biological Priority:</b> critical	<b>Type:</b> on-going
Provide support for municipalities implementing road stream crossing improvements			

#### Stressor(s) Addressed By This Conservation Action

Roads and Railroads

<b>Conservation Action</b>	<b>Category:</b> Policy	<b>Biological Priority:</b> high	<b>Type:</b> new
Continue efforts to identify barriers to aquatic organism passage			

#### Stressor(s) Addressed By This Conservation Action

Dams and Water Management-Use

<b>Conservation Action</b>	<b>Category:</b> Policy	<b>Biological Priority:</b> high	<b>Type:</b> new
Identify funding to construct passage structures at dams			

#### Stressor(s) Addressed By This Conservation Action

Dams and Water Management-Use

<b>Conservation Action</b>	<b>Category:</b> Policy	<b>Biological Priority:</b> high	<b>Type:</b> new
Provide outreach to practitioners on technologies that are effective at passing fish			

#### Stressor(s) Addressed By This Conservation Action

Dams and Water Management-Use

<b>Conservation Action</b>	<b>Category:</b> Policy	<b>Biological Priority:</b> high	<b>Type:</b> new
Collaborate with partners to develop monitoring standards for SGCN fish passage efficiency			

#### Stressor(s) Addressed By This Conservation Action

Dams and Water Management-Use

<b>Conservation Action</b>	<b>Category:</b> Policy	<b>Biological Priority:</b> high	<b>Type:</b> new
Apply state Streamflow standards to dams			

#### Stressor(s) Addressed By This Conservation Action

Dams and Water Management-Use

<b>Conservation Action</b>	<b>Category:</b> Policy	<b>Biological Priority:</b> high	<b>Type:</b> new
Collaborate with partners to develop incentives to encourage homeowners near lake/river shores to replace their old septic systems			

#### Stressor(s) Addressed By This Conservation Action

Domestic and Urban Waste Water

<b>Conservation Action</b>	<b>Category:</b> Policy	<b>Biological Priority:</b> high	<b>Type:</b> new
Collaborate with partners to develop standards for new/replacement road stream crossings			

#### Stressor(s) Addressed By This Conservation Action

Roads and Railroads

## SGCN and Conservation Actions Associated with Habitat Groupings

### Habitat Grouping: Streams, Rivers, Lakes, and Ponds

<b>Conservation Action</b>	<b>Category:</b> Policy	<b>Biological Priority:</b> high	<b>Type:</b> new
Collaborate with partners to develop a state road stream crossing restoration program with dedicated staff			
<b>Stressor(s) Addressed By This Conservation Action</b>			
Roads and Railroads			
<b>Conservation Action</b>	<b>Category:</b> Policy	<b>Biological Priority:</b> high	<b>Type:</b> on-going
Conduct statewide/watershed scale connectivity planning			
<b>Stressor(s) Addressed By This Conservation Action</b>			
Roads and Railroads			
<b>Conservation Action</b>	<b>Category:</b> Policy	<b>Biological Priority:</b> high	<b>Type:</b> on-going
Enhance coordination of agencies and NGOs to facilitate road stream crossing improvements			
<b>Stressor(s) Addressed By This Conservation Action</b>			
Roads and Railroads			
<b>Conservation Action</b>	<b>Category:</b> Policy	<b>Biological Priority:</b> moderate	<b>Type:</b> new
Encourage municipalities to increase the capacity of their treatment facilities			
<b>Stressor(s) Addressed By This Conservation Action</b>			
Domestic and Urban Waste Water			
<b>Conservation Action</b>	<b>Category:</b> Public Outreach	<b>Biological Priority:</b> critical	<b>Type:</b> on-going
Continue Stream Smart general and technical training			
<b>Stressor(s) Addressed By This Conservation Action</b>			
Roads and Railroads			
<b>Conservation Action</b>	<b>Category:</b> Public Outreach	<b>Biological Priority:</b> high	<b>Type:</b> new
Provide outreach and education to horticulturalists and landscape architects on the importance of maintaining riparian vegetation during the course of their work			
<b>Stressor(s) Addressed By This Conservation Action</b>			
Domestic and Urban Waste Water			
<b>Conservation Action</b>	<b>Category:</b> Public Outreach	<b>Biological Priority:</b> high	<b>Type:</b> new
Provide outreach and education to town planning boards on the importance of maintaining riparian vegetation to prevent declines in water quality			
<b>Stressor(s) Addressed By This Conservation Action</b>			
Domestic and Urban Waste Water, Industrial and Military Effluents, Agricultural and Forestry Effluents			
<b>Conservation Action</b>	<b>Category:</b> Public Outreach	<b>Biological Priority:</b> high	<b>Type:</b> new
Provide outreach and education to dam operators on ways to facilitate SGCN fish passage at dams			
<b>Stressor(s) Addressed By This Conservation Action</b>			
Dams and Water Management-Use			
<b>Conservation Action</b>	<b>Category:</b> Public Outreach	<b>Biological Priority:</b> high	<b>Type:</b> new
Provide outreach and education to residents living on lake or river shores on the importance of maintaining riparian buffers, including options that allow water views (i.e. unmowed grass, shrubs)			
<b>Stressor(s) Addressed By This Conservation Action</b>			
Domestic and Urban Waste Water			
<b>Conservation Action</b>	<b>Category:</b> Public Outreach	<b>Biological Priority:</b> high	<b>Type:</b> new
Provide outreach and education to code enforcement officers and town planners on wastewater discharge			
<b>Stressor(s) Addressed By This Conservation Action</b>			
Domestic and Urban Waste Water			

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### Habitat Grouping: Streams, Rivers, Lakes, and Ponds

<b>Conservation Action</b>	<b>Category:</b> Public Outreach	<b>Biological Priority:</b> high	<b>Type:</b> new
Work with municipalities to increase treatment capacity of wastewater facilities to reduce wastewater impacts to aquatic habitats			
<b>Stressor(s) Addressed By This Conservation Action</b>			
Domestic and Urban Waste Water			
<b>Conservation Action</b>	<b>Category:</b> Public Outreach	<b>Biological Priority:</b> high	<b>Type:</b> new
Provide online tools to prioritize road crossing upgrades			
<b>Stressor(s) Addressed By This Conservation Action</b>			
Roads and Railroads			
<b>Conservation Action</b>	<b>Category:</b> Public Outreach	<b>Biological Priority:</b> high	<b>Type:</b> on-going
Encourage the use of temporary and permanent bridges rather than culverts			
<b>Stressor(s) Addressed By This Conservation Action</b>			
Roads and Railroads			
<b>Conservation Action</b>	<b>Category:</b> Public Outreach	<b>Biological Priority:</b> high	<b>Type:</b> on-going
Encourage information exchange forums such as Fisheries Improvement Network (FIN) and Small Woodlot Owners Association of Maine (SWOAM)			
<b>Stressor(s) Addressed By This Conservation Action</b>			
Roads and Railroads			
<b>Conservation Action</b>	<b>Category:</b> Public Outreach	<b>Biological Priority:</b> high	<b>Type:</b> on-going
Encourage alternative road routes that do not interfere with streams or riparian areas			
<b>Stressor(s) Addressed By This Conservation Action</b>			
Roads and Railroads			
<b>Conservation Action</b>	<b>Category:</b> Public Outreach	<b>Biological Priority:</b> high	<b>Type:</b> on-going
Continue advanced aquatic SGCN organism passage training			
<b>Stressor(s) Addressed By This Conservation Action</b>			
Roads and Railroads			
<b>Conservation Action</b>	<b>Category:</b> Public Outreach	<b>Biological Priority:</b> moderate	<b>Type:</b> new
Collaborate with partners to develop best management practices for development near waterways			
<b>Stressor(s) Addressed By This Conservation Action</b>			
Domestic and Urban Waste Water			
<b>Conservation Action</b>	<b>Category:</b> Public Outreach	<b>Biological Priority:</b> moderate	<b>Type:</b> new
Find ways to support communities addressing sewer overflow (e.g., treat storm water differently than sewage where appropriate)			
<b>Stressor(s) Addressed By This Conservation Action</b>			
Domestic and Urban Waste Water			
<b>Conservation Action</b>	<b>Category:</b> Public Outreach	<b>Biological Priority:</b> moderate	<b>Type:</b> on-going
Train new and existing engineers on proper ways to design fish passage structures through universities and training programs			
<b>Stressor(s) Addressed By This Conservation Action</b>			
Dams and Water Management-Use			
<b>Conservation Action</b>	<b>Category:</b> Research	<b>Biological Priority:</b> high	<b>Type:</b> new
Solicit help from experts in septic system design to determine solutions to septic seepage into waterways			
<b>Stressor(s) Addressed By This Conservation Action</b>			
Domestic and Urban Waste Water			

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### Habitat Grouping: Streams, Rivers, Lakes, and Ponds

<b>Conservation Action</b>	<b>Category:</b> Research	<b>Biological Priority:</b> high	<b>Type:</b> on-going
Investigate alternative technologies to promote passage of aquatic organisms			
<b>Stressor(s) Addressed By This Conservation Action</b>			
Dams and Water Management-Use			
<b>Conservation Action</b>	<b>Category:</b> Research	<b>Biological Priority:</b> high	<b>Type:</b> on-going
Research fish behavior and movement to identify ways to improve the design of fish passage structures			
<b>Stressor(s) Addressed By This Conservation Action</b>			
Dams and Water Management-Use			
<b>Conservation Action</b>	<b>Category:</b> Research	<b>Biological Priority:</b> high	<b>Type:</b> on-going
Conduct research on the economic impact of invasive species, mitigation strategies, and containment strategies in aquatic ecosystems			
<b>Stressor(s) Addressed By This Conservation Action</b>			
Invasive Non-native-Alien Species-Diseases			
<b>Conservation Action</b>	<b>Category:</b> Research	<b>Biological Priority:</b> moderate	<b>Type:</b> on-going
Increase understanding of climate change/infrastructure threats to freshwater aquatic ecosystems			
<b>Stressor(s) Addressed By This Conservation Action</b>			
Roads and Railroads, Habitat Shifting or Alteration, Dams and Water Management-Use			
<b>Conservation Action</b>	<b>Category:</b> Species Management	<b>Biological Priority:</b> high	<b>Type:</b> on-going
Expand efforts to suppress and control invasive species, including through reclamation of water bodies			
<b>Stressor(s) Addressed By This Conservation Action</b>			
Invasive Non-native-Alien Species-Diseases			
<b>Conservation Action</b>	<b>Category:</b> Species Management	<b>Biological Priority:</b> moderate	<b>Type:</b> on-going
Promote native species abundance in aquatic SGCN habitats in order to foster competition that may reduce or slow the spread of invasives			
<b>Stressor(s) Addressed By This Conservation Action</b>			
Invasive Non-native-Alien Species-Diseases			
<b>Conservation Action</b>	<b>Category:</b> Survey and Monitoring	<b>Biological Priority:</b> high	<b>Type:</b> new
Identify priority locations for ecological flow management in aquatic habitats			
<b>Stressor(s) Addressed By This Conservation Action</b>			
Dams and Water Management-Use			
<b>Conservation Action</b>	<b>Category:</b> Survey and Monitoring	<b>Biological Priority:</b> high	<b>Type:</b> new
Develop coastal focus areas encompassing marine habitats with high concentrations of SGCN using improved species occurrence maps			
<b>Stressor(s) Addressed By This Conservation Action</b>			
Domestic and Urban Waste Water			
<b>Conservation Action</b>	<b>Category:</b> Survey and Monitoring	<b>Biological Priority:</b> high	<b>Type:</b> on-going
Increase habitat surveys and models for road stream crossings			
<b>Stressor(s) Addressed By This Conservation Action</b>			
Roads and Railroads			
<b>Conservation Action</b>	<b>Category:</b> Survey and Monitoring	<b>Biological Priority:</b> high	<b>Type:</b> on-going
Complete a statewide inventory of the status and condition of road and railroad crossings, including on headwater streams			
<b>Stressor(s) Addressed By This Conservation Action</b>			
Roads and Railroads			

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<b>Conservation Action</b>	<b>Category:</b> Survey and Monitoring	<b>Biological Priority:</b> moderate	<b>Type:</b> new
Develop better methods to map potential barriers in priority watersheds			

#### **Stressor(s) Addressed By This Conservation Action**

Dams and Water Management-Use, Roads and Railroads

<b>Conservation Action</b>	<b>Category:</b> Survey and Monitoring	<b>Biological Priority:</b> moderate	<b>Type:</b> on-going
Track completed road stream crossing projects			

#### **Stressor(s) Addressed By This Conservation Action**

Roads and Railroads

### Species Conservation Actions:

Conservation actions that may benefit species associated with this habitat grouping can be found in Maine's 2015 Wildlife Action Plan: Element 1, Table 1-3. Click on the species of interest to launch a species based report summarizing relevant conservation actions and associated habitats.

*The Wildlife Action Plan was developed through a lengthy participatory process with state agencies, targeted conservation partners, and the general public. The Plan is non-regulatory. The species, stressors, and voluntary conservation actions identified in the Plan complement, but do not replace, existing work programs and priorities by state agencies and partners.*